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PTO/SB/21 (02-04)

Approved for use through 07/31/2006. OMB 0651-0031

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**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Application Number US Pat. 6,907,246 B2

Filing Date Issued 6/14/05

First Named Inventor Xu et al.

Art Unit 2683

Examiner Name Marcos L. Torres

Attorney Docket Number 28999.39

Certificate

SEP 12 2005

of Correction

Total Number of Pages in This Submission

ENCLOSURES (Check all that apply)

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Fee Transmittal Form | <input type="checkbox"/> Drawing(s) | <input type="checkbox"/> After Allowance communication to Technology Center (TC) |
| <input type="checkbox"/> Fee Attached | <input type="checkbox"/> Licensing-related Papers | <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences |
| <input type="checkbox"/> Amendment/Reply | <input type="checkbox"/> Petition | <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) |
| <input type="checkbox"/> After Final | <input type="checkbox"/> Petition to Convert to a Provisional Application | <input type="checkbox"/> Proprietary Information |
| <input type="checkbox"/> Affidavits/declaration(s) | <input type="checkbox"/> Power of Attorney, Revocation | <input type="checkbox"/> Status Letter |
| <input type="checkbox"/> Extension of Time Request | <input type="checkbox"/> Change of Correspondence Address | <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): |
| <input type="checkbox"/> Express Abandonment Request | <input type="checkbox"/> Terminal Disclaimer | Return Receipt postcard |
| <input type="checkbox"/> Information Disclosure Statement | <input type="checkbox"/> Request for Refund | |
| <input type="checkbox"/> Certified Copy of Priority Document(s) | <input type="checkbox"/> CD, Number of CD(s) _____ | |
| <input type="checkbox"/> Response to Missing Parts/Incomplete Application | Remarks | |
| <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | Certificate of Correction
Request for Correction of Patent Typographical Error | |

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENTFirm or Individual name Ting-Mao Chao, Esq., Ltd. Recognition L0119
PRESTON GATES & ELLIS LLP

Signature

Date

08/31/2005

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or printed name Patricia Wiggins

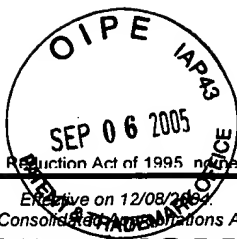
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Date 08/31/2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PTO/SB/17 (12-04v2)

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Effective on 12/08/2005
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).**FEE TRANSMITTAL**
For FY 2005☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 0

Complete if Known

Application Number	US Pat. 6,907,246
Filing Date	Issued: 6/14/05
First Named Inventor	Xu, et al.
Examiner Name	Marcos L. Torres
Art Unit	2683
Attorney Docket No.	28999.39

METHOD OF PAYMENT (check all that apply)☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____☒ Deposit Account Deposit Account Number: 50-3414 Deposit Account Name: _____

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES**Fee Description**

Each claim over 20 (including Reissues)

Each independent claim over 3 (including Reissues)

Multiple dependent claims

Fee (\$)	Small Entity Fee (\$)
50	25
200	100
360	180

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
10	- 20 or HP = 0	x 50 =	0

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
3	- 3 or HP = 0	x 200 =	0

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/ 50 =	(round up to a whole number) x	0 =	

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Certificate of Correction fee (if applicable)

Fees Paid (\$)

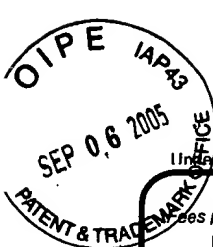
SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	Telephone 415-882-8200
Name (Print/Type)	Ting-Mao Chao, Esq., Ltd. Recognition No. L0119	Date	8/31/05

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL For FY 2005

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 0

Complete if Known

Application Number	US Pat. 6,907,246
Filing Date	Issued: 6/14/05
First Named Inventor	Xu, et al.
Examiner Name	Marcos L. Torres
Art Unit	2683
Attorney Docket No.	28999.39

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 50-3414 Deposit Account Name: _____

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description

Each claim over 20 (including Reissues)

Fee (\$)	Small Entity Fee (\$)
50	25

Each independent claim over 3 (including Reissues)

200	100
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Multiple dependent claims

360	180
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Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
10 - 20 or HP =	0	50	0

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
3 - 3 or HP =	0	200	0

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/ 50 =	(round up to a whole number) x	0	

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Fees Paid (\$)

Other (e.g., late filing surcharge): Certificate of Correction fee (if applicable)

SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	Telephone 415-882-8200
Name (Print/Type)	Ting-Mao Chao, Esq., Ltd. Recognition No. L0119	Date	8/31/05

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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SEP 13 2005 SEP 13 2005



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Patent application of

Guanghan Xu et al.

For: **Method and System for Reducing
Wireless Multi-Cell Interferences
Through Segregated Channel
Assignments and Segregated Antenna
Beams**

) Examiner: **Marcos L. Torres**

) Group Art Unit: **2683**

) Attorney Ref. No.: **52506-00003**

) US Patent No. **6,907,246 B2**

Serial No.: **09/989,535**

Filed: **11/20/2001**

Atty. Docket No.: **28999.39**

REQUEST FOR CERTIFICATE OF CORRECTION

Attention: Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants hereby request that a Certificate of Correction be issued for US Patent No. 6,907,246 B2 to correct a minor typographical error. A copy of the Amendment filed August 17, 2004 is enclosed highlighting the omitted text.

This error was made by the USPTO and therefore, no fee is calculated to be due. However, authorization is given on the enclosed Fee Transmittal to charge any fees, underpayments or overpayments that may be due for the filing of this Request.

Respectfully submitted,

Ting-Mao Chao, Ltd. Recognition L0119
Attorneys for Applicant

Preston Gates & Ellis LLP
55 Second Street, Suite 1700
San Francisco, CA 94105
Telephone: (415) 882-8200
Facsimile: (415) 882-8220

SEP 13 2005



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 09/989,535

Examiner: Marcos L. Torres

Applicant: Guanghan Xu

Art Unit: 2683

Title: Method and System for Reducing Wireless
Multi-Cell Interferences Through Segregated Channel
Assignments and Segregated Antenna Beams

Confirmation No.: 9915

Express Mail No. ER 740516352 US

Filed: November 20, 2001

Atty. Docket No.: 28999.39

Atty. Ref. No.: R0347-00200

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Commissioner for Patents and Trademark
MAILSTOP FEE AMENDMENT
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

Dear Sir:

This Amendment is in response to the Office Action mailed on April 27, 2004. An extension of one-month response time is hereby requested. Please amend the above-identified application as indicated below. Applicant respectfully requests for re-examination and reconsideration of the application based on the amendments and remarks provided.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this Amendment.

Remarks begin on page 13 of this Amendment.

SEP 13 2005

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

What is claimed is:

1. (Currently Amended) A method for reducing multi-cell signal interferences in a wireless communication network, the method comprising:

dividing an available frequency spectrum into a plurality of channels;

segregating a first wireless communication coverage unit into a first number of geographical segments;

grouping the channels into a second number of channel blocks;

assigning each channel block to at least one of the segregated geographical segments with predetermined priorities; and

repeating the above steps for each neighboring wireless communication coverage unit of the first wireless communication coverage unit,

wherein the channels in different channel blocks exhibit no higher mutual interference than the channels in the same channel block, and wherein the channel block assigned for each segregated segment of the first wireless communication coverage unit is different from the channel block assigned for the segregated segment of a second wireless communication coverage unit that immediately borders with the segregated segment of the first wireless coverage unit even if the first and second wireless communication coverage units share the same frequency spectrum, wherein a location of a wireless terminal entering the first wireless communication coverage unit is detected by utilizing one or more segregated access code channels (ACCs) for

the segregated geographical segments of the first wireless communication coverage unit to identify the wireless terminal wherein the ACCs and the segments bear a one-to-one relationship.

2. (Canceled) The method of claim 1 wherein the step of assigning further includes assigning the channel blocks to the geographical segments such that the channel blocks having a higher likelihood of mutual interference are separated farther apart to minimize the multi-cell signal interferences.

3. (Canceled) The method of claim 1 wherein the step of segregating further includes radially segregating the first wireless communication coverage unit into a plurality of sectors or segments.

4. (Canceled) The method of claim 1 wherein the step of segregating further includes segregating the first wireless communication coverage unit into a plurality of co-centric nested polygon or nested ring areas around the center of the wireless communication coverage unit.

5. (Canceled) The method of claim 1 wherein the step of segregating further includes segregating the first wireless communication coverage unit into a plurality of sectors around the center of the first wireless communication coverage unit.

6. (Canceled) The method of claim 5 wherein each of the sectors is further divided radially into a plurality of segments of a predetermined polygon shape.

7. (Canceled) The method of claim 1 wherein the step of grouping further includes

assigning one or more subcarriers to each channel block.

8. (Canceled) The method of claim 7 wherein the subcarriers assigned to each channel block are contiguous.

9. (Canceled) The method of claim 1 wherein the step of grouping further includes assigning one or multiple time slots to each channel block.

10. (Canceled) The method of claim 1 wherein the step of grouping further includes assigning one or multiple code channels to each channel block.

11. (Canceled) The method of claim 1 wherein the step of grouping further includes assigning all the code channels in one or more contiguous subcarriers to one channel block in a multiple carrier code division multiple access system.

12. (Canceled) The method of claim 1 further comprising detecting a location of a wireless terminal entering the first wireless communication coverage unit.

13. (Canceled) The method of claim 12 wherein the step of detecting further includes utilizing one or more segregated access code channels (ACCs) for the segregated geographical segments of the first wireless communication coverage unit to identify the wireless terminal wherein the ACCs and the segments bear a one-to-one relationship.

14. (Canceled) The method of claim 12 wherein the step of detecting further includes

utilizing a plurality of antennas for the first wireless communication coverage unit to identify the wireless terminal, each antenna pointing to and covering a segregated geographical segment.

15. (Currently Amended) The method of claim 12 wherein ~~the step of detecting further includes utilizing~~ an adaptive antenna array is used for detecting the location of the wireless terminal entering the wireless communication coverage unit, wherein at least one ACC physical attribute of the adaptive antenna array is unique to each geographical segment.

16. (Currently Amended) ~~The method of claim 12~~ A method for reducing multi-cell signal interferences in a wireless communication network, the method comprising: dividing an available frequency spectrum into a plurality of channels; segregating a first wireless communication coverage unit into a first number of geographical segments; grouping the channels into a second number of channel blocks; assigning each channel block to at least one of the segregated geographical segments with predetermined priorities; and repeating the above steps for each neighboring wireless communication coverage unit of the first wireless communication coverage unit, wherein the channels in different channel blocks exhibit no higher mutual interference than the channels in the same channel block, and wherein the channel block assigned for each segregated segment of the first wireless communication coverage unit is different from the channel block assigned for the segregated segment of a second wireless communication coverage unit that immediately borders with the segregated segment of the first wireless coverage unit even if the first and second wireless communication coverage units share the same frequency spectrum, wherein ~~the step of detecting further includes utilizing an exclusive antenna is used~~ with an exclusive antenna pattern for covering each geographical segment for detecting a location of the wireless terminal entering the wireless communication

coverage unit.

17. (Canceled) The method of claim 12 wherein the step of detecting further includes using a direction of arrival of a signal sent by the wireless terminal based on one or more magnitudes and phases of the signal received by one or more antennas for identifying the location of the wireless terminal.

18. (Canceled) The method of claim 12 wherein the step of detecting further includes utilizing a path loss between a base station transceiver unit and the wireless terminal for estimating the distance of the wireless terminal to the base station transceiver unit.

19. (Currently Amended) A method for reducing multi-frequency signal interference in a wireless communication network, the network having a plurality of cells bordering on each other, each cell using a predetermined frequency spectrum for communications therein, the method comprising:

segregating a first cell into a first number of geographical segments;

dividing the predetermined frequency spectrum for the first cell into a plurality of channels;

establishing a channel assignment priority hierarchy for associating one or more channels to each geographical segment of the first cell;

repeating the above three steps for each cell bordering with the first cell; and

assigning channels to a terminal entering a segregated geographical segment of the first cell according to the established channel assignment priority hierarchy,

wherein the channel assignment priority hierarchy for the first cell and its bordering cells

assures that the assigned channels are selected from the channels associated with the geographical segment of the first cell in which the terminal locates, and wherein the channels for such a geographical segment are different from the channels of a similarly segregated segment of another wireless cell that immediately borders therewith, wherein a location of the wireless terminal entering the first wireless communication coverage unit is detected by utilizing one or more segregated access code channels (ACCs) for the segregated geographical segments of the first wireless communication coverage unit to identify the wireless terminal wherein the ACCs and the segments bear a one-to-one relationship.

20. (Canceled) The method of claim 19 wherein the step of establishing further includes:
dividing the frequency spectrum into a plurality of channels;
grouping the channels into a second number of channel blocks; and
prioritizing the channel blocks for servicing each geographical segment based on channel assignment information of neighboring cells of the first cell.

21. (Canceled) The method of claim 20 wherein the channel assignment information is information for frequency channels used for a geographical segment of a second cell bordering on the geographical segment of the first cell.

22. (Canceled) The method of claim 19 further comprising detecting the location of the terminal entering the first cell.

23. (Canceled) The method of claim 22 wherein the step of detecting further includes using segregated access code channels (ACCs) for different geographical segments of the first cell in

order to identify the terminal.

24. (Canceled) The method of claim 22 wherein the step of detecting further includes using a plurality of antennas for the first cell, each pointing to and covering a segregated geographical segment.

25. (Currently Amended) The method of claim 22 19 wherein ~~the step of detecting further includes using an adaptive antenna array is used for detecting the location of the wireless terminal entering~~ the wireless communication coverage unit, wherein at least one ACC physical attribute is distinctive for each geographical segment.

26. (Canceled) The method of claim 22 wherein the step of detecting further includes using an exclusive antenna with an exclusive receive pattern for covering each geographical segment.

27. (Canceled) The method of claim 22 wherein the step of detecting further includes using a direction of arrival of a signal from the terminal for identifying the location of the terminal.

28. (Currently Amended) ~~The method of claim 22 wherein the step of detecting further includes calculating a path loss between a base station transceiver and the terminal for identifying the location of the terminal.~~ A method for reducing multi-frequency signal interference in a wireless communication network, the network having a plurality of cells bordering on each other, each cell using a predetermined frequency spectrum for communications therein, the method comprising: segregating a first cell into a first number of geographical segments; dividing the predetermined frequency spectrum for the first cell into a

plurality of channels; establishing a channel assignment priority hierarchy for associating one or more channels to each geographical segment of the first cell; repeating the above three steps for each cell bordering with the first cell; and assigning channels to a terminal entering a segregated geographical segment of the first cell according to the established channel assignment priority hierarchy, wherein the channel assignment priority hierarchy for the first cell and its bordering cells assures that the assigned channels are selected from the channels associated with the geographical segment of the first cell in which the terminal locates, and wherein the channels for such a geographical segment are different from the channels of a similarly segregated segment of another wireless cell that immediately borders therewith, wherein a path loss between a base station transceiver and the terminal is calculated for identifying a location of the terminal entering the wireless communication coverage unit.

29. (Canceled) A base station transceiver system for reducing multi-cell signal interferences in a wireless communication network, comprising:

- means for dividing an available frequency spectrum into a plurality of channels;
 - means for segregating a first wireless communication coverage unit into a first number of geographical segments;
 - means for grouping the channels into the first number of channel blocks; and
 - means for assigning each channel block to at least one of the segregated geographical segments with predetermined priorities,
- wherein the channels in different channel blocks exhibit no higher mutual interference than the channels in the same channel block, and wherein the channel block assigned for each segregated segment of the first wireless communication coverage unit is different from the channel block assigned for the segregated segment of a second wireless communication coverage

unit that immediately borders with the segregated segment of the first wireless coverage unit even if the first and second wireless communication coverage units share the same frequency spectrum.

30. (Canceled) The system of claim 29 wherein the means for assigning further includes means for assigning the channel blocks to the geographical segments with different priorities such that the multi-cell interference is reduced.

31. (Canceled) The system of claim 29 wherein the means for segregating further includes means for segregating the first wireless communication coverage unit into a plurality of sectors of co-centric circular or polygon areas.

32. (Canceled) The system of claim 29 wherein the means for segregating further includes means for segregating the first wireless communication coverage unit into a plurality of sectors around the center of the first wireless communication coverage unit.

33. (Canceled) The system of claim 29 wherein the means for segregating further includes means for radially segregating the first wireless communication coverage unit into a plurality of sectors.

34. (Canceled) The system of claim 33 wherein each of the sectors is further divided radially into a plurality of segments of one or more polygon shapes.

35. (Canceled) The system of claim 29 wherein the means for grouping further includes

means for assigning one or more subcarriers to each channel block.

36. (Canceled) The system of claim 35 wherein the subcarriers assigned to each channel block are contiguous.

37. (Canceled) The system of claim 29 wherein the means for grouping further includes means for assigning one or multiple time slots to each channel block.

38. (Canceled) The system of claim 29 wherein the means for grouping further includes means for assigning one or multiple code channels to each channel block.

39. (Canceled) The system of claim 29 wherein the means for grouping further includes means for assigning all the code channels in one or multiple of contiguous subcarriers to one channel block in a multiple carrier code division multiple access system.

40. (Canceled) The system of claim 29 further comprising means for detecting a location of a wireless terminal entering the first wireless communication coverage unit.

41. (Canceled) The system of claim 40 wherein the means for detecting further includes means for utilizing one or more segregated access code channels (ACCs) for the segregated geographical segments of the first wireless communication coverage unit to identify the wireless terminal wherein the ACCs and the segments bear a one-to-one relationship.

42. (Canceled) The system of claim 40 wherein the means for detecting further includes

means for utilizing a plurality of antennas for the first wireless communication coverage unit to identify the wireless terminal, each antenna pointing to and covering a segregated geographical segment.

43. (Canceled) The system of claim 40 wherein the means for detecting further includes means for utilizing an adaptive antenna array for the wireless communication coverage unit, wherein at least one ACC physical attribute of the adaptive antenna array is unique to each geographical segment.

44. (Canceled) The system of claim 40 wherein the means for detecting further includes means for utilizing an exclusive antenna with an exclusive antenna pattern for covering each geographical segment.

45. (Canceled) The system of claim 40 wherein the means for detecting further includes means for using a direction of arrival of a signal sent by the wireless terminal based on one or more magnitudes and phases of the signal received by one or more antennas for identifying the location of the wireless terminal.

46. (Canceled) The system of claim 40 wherein the means for detecting further includes means for utilizing a path loss between a base station transceiver unit and the wireless terminal for estimating the distance of the wireless terminal to the base station transceiver unit.

REMARKS

Claims 1-46 were pending in the application. Claims 2-14, 17-18, 20-24, 26-27, 29-46 have been canceled without prejudice. Claims 1, 15, 16, 19, 25, 28 have been amended. Applicant respectfully requests allowance of each of the pending claims.

The Rejections under 35 U.S.C. §103

Claims 1-2, 5, 19-21, 29-30 and 32 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wang in view of Thomas and further in view of Avidor.

Claims 3 and 33 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wang in view of Thomas and further in view of Avidor as applied to claims 1-2, 5, 19-21, 29-30 and 32, and further in view of Tse.

Claims 4, 6, 31 and 34 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wang in view of Thomas and further in view of Avidor as applied to claims 1-2, 5, 19-21, 29-30 and 32, and further in view of Ritter.

Claims 9 and 37 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wang in view of Thomas and further in view of Avidor as applied to claims 1-2, 5, 19-21, 29-30 and 32, and further in view of He.

Claims 10 and 38 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wang in view of Thomas and further in view of Avidor as applied to claims 1-2, 5, 19-21, 29-30 and 32, and further in view of Shanbhag.

Claims 12, 14, 16-18, 22, 24, 26-28, 40, 42 and 44-46 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wang in view of Thomas and further in view of Avidor as applied to claims 1-2, 5, 19-21, 29-30 and 32, and further in view of Bi.

Claims 13, 15, 23, 25, 41 and 43 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wang in view of Thomas and further in view of Avidor and further in view of

Bi as applied to claims 12, 14, 16-18, 22, 24, 26-28, 40, 42 and 44-46, and further in view of Engelbrecht.

With regard to the amended claims, they have been amended to include elements for specifically detecting a location of a wireless terminal using specific technologies so that the channel blocks can be assigned to the segregated geographical segments in which the wireless terminal is in with predetermined priorities. The Examiner has conceded that Wang and Thomas do not teach how to detect a location of a wireless terminal, while Bi has some teachings in this technology area. In fact, Bi only teaches generally about detecting the location of a wireless terminal, but fails to teach any specific methods as claimed. For example, Bi does not teach that the detection is done by utilizing one or more segregated access code channels (ACCs) for the segregated geographical segments of the first wireless communication coverage unit to identify the wireless terminal wherein the ACCs and the segments bear a one-to-one relationship. Similarly, Bi fails to teach that the detection is done by using a path loss between a base station transceiver and the terminal for identifying a location of the terminal entering the wireless communication coverage unit. As such, Wang, Thomas, and Bi, individually or in combination, fail to teach the claimed invention, and the currently amended claims are believed to be allowable.

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CONCLUSION

Applicant has made an earnest attempt to place this application in an allowable form. In view of the foregoing remarks, it is respectfully submitted that the pending claims are drawn to novel subject matter, patentably distinguishable over the prior art of record. The Examiner is therefore, respectfully requested to reconsider and withdraw the outstanding rejections.

Should the Examiner deem that any further clarification is desirable, the Examiner is invited to telephone the undersigned at the below listed telephone number.

Respectfully submitted,

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UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO. : 6,907,246 B2

APPLICATION NO.: 09/989,535

ISSUE DATE : June 14, 2005

INVENTOR(S) : Xu, et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 9,
Line 16, "entering the wireless communication." should be -- "entering the wireless communication coverage unit."

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Preston Gates Ellis LLP
55 Second Street, Suite 1700
San Francisco, CA 94105

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